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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,495	03/30/2001	Luke Surazski	2705-151	6556

20575 7590 10/04/2005

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EXAMINER	
MATTIS, JASON E	
ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/823,495	SURAZSKI ET AL.	
	Examiner	Art Unit	
	Jason E. Mattis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2005 and 13 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,18-28,32-38 and 45-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,18-28,32-38 and 45-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Response to Restriction Requirement filed on 7/13/05 and the Amendment filed on 3/25/05. The claims of Group I including claims 1-11, 18-28, 32-38, and 45-55 have been elected. Claims 1-11, 18-28, 32-38, and 45-55 are currently pending in the application.

Claim Objections

1. Claims 9, 26, 36, and 53 are objected to because of the following informalities.

Each of these claims contains a limitation similar to "assist the first device establish a communication with the second device". This limitation is worded poorly. It is recommended that this limitation be changed to "assist the first device in establishing communications with the second device" so that the claim is clearer.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-8, 18-25, 32-35, and 45-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Born et al. (U.S. Pat. 6404887) in view of Gupta et al. (U.S. Pat. 5689556) and in further view of Garakani et al. (U.S. Publication US 2002/0064168 A1).

With respect to claims 1, 18, 32, and 45, Born et al. discloses a signaling network switch using instructions stored on a storage medium to execute a method **(See column 5 lines 25-65 and Figure 1 of Born et al. for reference to an inter-exchange carrier (IXC) office 104, which is a network switch that has stored instructions to route calls over a network)**. Born et al. also discloses a network interface for coupling to a network **(See column 5 lines 25-45 and Figure 1 of Born et al. for reference to IXC 104 having network interfaces to other elements of the system 100)**. Born et al. further discloses a processor coupled with the network interface **(See column 5 lines 46-65 and Figure 1 of Born et al. for reference to the IXC 104 using interfaces to route calls between calling and called parties, meaning the IXC 104 acts as a processor to route the calls)**. Born et al. also discloses establishing a first connection through a network **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at point 6 of Figure 3, the IXC selecting an outbound termination trunk, which is a first connection through the network, for forwarding a call)**. Born et al. further discloses establishing a second connection **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at points 4 and 5 of Figure 3, the IXC establishing a second connection through the network**

with a local office of a calling party). Born et al. also discloses receiving audio content through the second connection and transmitting through the first connection an encoded form of the audio content **(See column 5 lines 46-65 and Figure 1 of Born et al. for reference to transporting call data, which is encoded audio content, through the connections over the network from the calling party to the called party)**. Although Born et al. does disclose sending a signal through the first connection to control the operation of an echo canceller **(See column 7 lines 1-30 of Born et al. for reference to controlling the operation of an echo canceller using a signal)**, Born et al. does not specifically disclose analyzing the audio content and transmitting a warning signal through the first connection if a periodic signal is detected in the audio content. Born et al. also does not specifically disclose that the audio content is transmitted as data packets through a data network.

With respect to claims 2, 19, 33, and 46, Born et al. does not disclose that analyzing the audio content is performed by looking ahead.

With respect to claims 3, 20, and 47, Born et al. does not disclose that the periodic signal has a double periodicity.

With respect to claims 7, 24, 34, and 51, Born et al. does not disclose determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending.

With respect to claims 1-3, 7, 18-20, 24, 32-34, 45-47, and 51, Gupta et al., in the field of communications, discloses analyzing audio content and transmitting a warning signal if a periodic signal is detected **(See column 4 lines 27-37, column 5**

line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to analyzing audio content by searching for a DTMF tone, which is a periodic signal, and for reference to setting a flag, which is a warning signal that is set when a periodic signal is detected). Gupta et al. also discloses that analyzing the audio content is performed by looking ahead **(See column 4 lines 38-58 and Figure 6 of Gupta et al. for reference to sampling and analyzing audio content by looking at the audio content before it is sent to the end user)**. Gupta et al. further discloses that the periodic signal has a double periodicity **(See column 4 lines 27-37 of Gupta et al. for reference to the periodic signal being a DTMF tone, which has double periodicity)**. Gupta et al. also discloses determining an ending of the periodic signal and transmitting a clear signal corresponding to the ending **(See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to the DTMF detector running continuously and for reference to continuously updating the flag, meaning that when the end of the period signal is detected, the flag will be set to false, which is a clear signal corresponding to the end of the periodic signal)**. The periodic signal detector of Gupta et al. has the advantage of making sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller **(See column 2 lines 6-36 of Gupta et al. for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gupta et al., to combine the periodic signal detector of Gupta et al. with the system and method of Born et al., with the motivation being to make sure that DTMF and other narrowband signals do not disrupt the

operation of an echo canceller (See column 2 lines 6-36 of Gupta et al. for reference to this advantage).

With respect to claims 1, 18, 32, and 45, Garakani et al., in the field of communications, discloses transmitting audio content in the form of data packets through a data network **(See page 1 paragraph 8 and Figure 1 of Garakani et al. for reference to a network that transmits audio content in the form of data packets over a packet network)**. Using the packet network to send audio encoded data packets has the advantage of allowing audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Garakani et al., to combine using the data packet network of Garakani et al., with the control signaling system and method of Born et al. and Gupta et al., with the motivation being to allow audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

With respect to claims 4, 21, and 48, Born et al. discloses that the signal is in-band **(See column 5 line 66 to column 6 line 15 of Born et al. for reference to the signals that control the echo canceller being sent in-band with the call data using bit robbing)**.

With respect to claims 5, 22, and 49, Born et al. discloses that the signal is out of band **(See column 2 lines 19-27 of Born et al. for reference to using CCS signaling send control signals out of band in a dedicated control channel)**.

With respect to claims 6, 23, and 50, Born et al. discloses that the warning signal is a named signaling event **(See column 7 lines 1-30 of Born et al. for reference to echo canceller controlling signal being a named signal event that is used to set the echo canceller to an inactive mode)**.

With respect to claims 8, 25, 35, and 52, Born et al. discloses determining a duration to send a signal to an echo canceller and encoding the duration in the signal **(See column 7 liens 1-30 of Born et al. for reference to using a signal to set the echo canceller in an active or inactive mode for a particular number of frames and/or for a particular amount of time)**.

With respect to claims 9, 26, 36, and 53, Born et al. discloses a signaling network call manager using instructions stored on a storage medium to execute a method **(See column 5 lines 25-65 and Figure 1 of Born et al. for reference to an inter-exchange carrier (IXC) office 104, which is a signaling network call manager that has stored instructions to route calls over a network)**. Born et al. also discloses a network interface for coupling to a network **(See column 5 lines 25-45 and Figure 1 of Born et al. for reference to IXC 104 having network interfaces to other elements of the system 100)**. Born et al. further discloses a processor coupled with the network interface **(See column 5 lines 46-65 and Figure 1 of Born et al. for reference to the IXC 104 using interfaces to route calls between calling and called**

parties, meaning the IXC 104 acts as a processor to route the calls). Born et al. further discloses establishing a first network call manager connection with a first device **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at point 6 of Figure 3, the IXC selecting an outbound termination trunk, which is a first connection through the network, for forwarding a call)**. Born et al. further discloses establishing a second network call manager connection with a second device **(See column 8 lines 28-41 and Figure 3 of Born et al. for reference to, at points 4 and 5 of Figure 3, the IXC establishing a second connection through the network with a local office of a calling party)**. Born et al. also discloses assisting the first devices in establishing a connection with the second device through the packet network **(See column 8 lines 27-51 and Figure 3 of Born et al. for reference to the IXC assisting in establishing a connection)**. Born et al. further discloses determining a duration to send a signal to an echo canceller and encoding the duration in the signal **(See column 7 liens 1-30 of Born et al. for reference to using a signal to set the echo canceller in an active or inactive mode for a particular number of frames and/or for a particular amount of time)**. Although Born et al. does disclose sending a signal through the first connection to control the operation of an echo canceller **(See column 7 lines 1-30 of Born et al. for reference to controlling the operation of an echo canceller using a signal)**, Born et al. does not specifically disclose generating a periodic signal and transmitting a warning signal and a periodic signal through one of the first and second connections. Born et al. also does not disclose that the network is a packet network with the first and second connections not being used to transmit voice

data. Born et al. further does not disclose transmitting the warning signal in at least one data packet to be received by an IP telephone with an acoustic echo canceller.

With respect to claims 10, 27, 37, and 54, Born et al. does not disclose that the periodic signal has a double periodicity.

With respect to claims 11, 28, 38, and 55, Born et al. does not disclose identifying a type of the periodic signal and determining a time duration from the identified type.

With respect to claims 9-11, 26-28, 36-38, and 53-55, Gupta et al., in the field of communications, discloses analyzing audio content and transmitting a warning signal if a periodic signal is detected **(See column 4 lines 27-37, column 5 line 66 to column 6 line 9, and Figure 6 of Gupta et al. for reference to analyzing audio content by searching for a DTMF tone, which is a periodic signal, and for reference to setting a flag, which is a warning signal that is set when a periodic signal is detected)**. , Gupta et al. also discloses that the periodic signal has a double periodicity **(See column 4 lines 27-37 of Gupta et al. for reference to the periodic signal being a DTMF tone, which has double periodicity)**. Gupta et al. further discloses identifying a type of the periodic signal and determining a time duration from the identified type **(See column 5 line 66 to column 6 line 9, and Figures 4-8 of Gupta et al. for reference to determining the type of periodic signal, for example determining if the periodic signal is a generic signal, a 2100 Hz signal, a DTMF signal, or a dial tone signal, and based on which signal is found, controlling the time duration in a different manner as disclosed in the flow charts of Figures 4-8)**. The periodic signal

detector of Gupta et al. has the advantage of making sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller **(See column 2 lines 6-36 of Gupta et al. for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gupta et al., to combine the periodic signal detector of Gupta et al. with the system and method of Born et al., with the motivation being to make sure that DTMF and other narrowband signals do not disrupt the operation of an echo canceller (See column 2 lines 6-36 of Gupta et al. for reference to this advantage).

With respect to claims 9, 26, 36, and 53, Garakani et al., in the field of communications, discloses transmitting audio content in the form of data packets through a data network **(See page 1 paragraph 8 and Figure 1 of Garakani et al. for reference to a network that transmits audio content in the form of data packets over a packet network)**. Garakani et al. also discloses that signaling to set up a connection is performed out-of-band **(See pages 2-3 paragraph 33 of Garakani et al. for reference to signaling messages being sent out-of-band meaning they are not through the same call manager connection that voice data is sent through)**. Garakani et al. further discloses sending control signals to an echo canceller of an IP telephone **(See page 3 paragraph 35 of Garakani et al. for reference to sending signaling that controls an echo cancellation to an IP telephone)**. Using the packet network to send audio encoded data packets has the advantage of allowing audio calls

to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Garakani et al., to combine using the data packet network of Garakani et al., with the control signaling system and method of Born et al. and Gupta et al., with the motivation being to allow audio calls to be connected and routed over the Internet, which is less expensive than routing audio calls over a traditional circuit switched telephone network.

Response to Arguments

2. Applicant's arguments with respect to claims 1-11, 18-28, 32-38, and 45-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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